1. A method of applying an encapsulant material to an ink jet print cartridge comprising the steps of:

providing a compliant stencil having at least one aperture;

providing an ink jet cartridge having an outer portion; and

stencil printing an encapsulant material onto the outer portion of the ink jet print cartridge thereby forming a layer of encapsulant material.

2. The method of claim 1 wherein said ink jet print cartridge comprises:

a flexible circuit, a heater chip and at least one electrical connection between the flexible circuit and the heater chip, wherein said outer portion of the ink jet print cartridge comprises the at least one electrical connection.

3. The method of claim 2 wherein said flexible circuit includes at least one electrical trace and said heater chip includes at least one bond pad, and said at least one electrical connection comprises said at least one electrical trace coupled to said at least one bond pad.

4. The method of claim 3 wherein said at least one electrical trace is TAB bonded to said at least one bond pad.

5. The method of claim 1 wherein said stencil is made of a material selected from the group consisting of plastic, polyimide, fluoropolymer coated polyimide, stainless steel and combinations thereof.

6. The method of claim 1 wherein said stencil has a thickness of from about 0.001 to about 0.015 inches.

7. The method of claim 1 wherein said step of stencil printing comprises:

aligning the stencil with a specific position on the print head cartridge such that the at least one aperture aligns with the outer portion of the ink jet print cartridge;

depositing the encapsulant material on the stencil; and

extruding the encapsulant material through the at least one aperture and onto the outer portion of the ink jet print cartridge.

8. The method of claim 1 wherein the encapsulant material comprises a polymeric material.

9. The method of claim 8 wherein said polymeric material is curable by actinic radiation, thermal energy or by a combination of actinic radiation and thermal energy.

10. The method of claim 9 further comprising:

exposing the stencil printed layer of encapsulant material to either actinic radiation, thermal energy or a combination thereof to substantially cure the polymeric material.

11. The method of claim 1 wherein the encapsulant material has a viscosity of from about 25,000 to about 240,000 centipoise as measured on a Brookfield cone and plate viscometer at 25° C. at a shear rate of 2.0 s^{-1} and a thixotropic index of from about 1 to about 10 as measured at 2.0 s^{-1} and 20.0 s^{-1}.

12. The method of claim 1 wherein the stencil printed layer of encapsulant material has a height from about 0.001 to about 0.015 inches.

13. An ink jet print cartridge including an encapsulant material applied in accordance with claim 1.

14. A method for protecting electrical traces on a flexible circuit and connections between the traces and one or more heater chip/nozzle plate assemblies for an ink jet printer comprising the steps of:

providing a stencil having at least one aperture;

applying an encapsulant material through the at least one aperture onto the electrical traces and the connections between the traces and the one or more heater chip/nozzle plate assemblies.

15. The method of claim 14 wherein said stencil is made of a material selected from the group consisting of plastic, polyimide, fluoropolymer coated polyimide, stainless steel and combinations thereof.

16. The method of claim 14 wherein said stencil has a thickness of from about 0.001 to about 0.015 inches.

17. The method of claim 14 wherein said step of applying an encapsulant material comprises:

aligning the stencil such that the at least one aperture aligns with the electrical traces and the connections between the traces and the one or more heater chip/nozzle plate assemblies;

depositing the encapsulant material on the stencil; and

extruding the encapsulant material through the at least one aperture and onto the electrical traces and the connections between the traces and the one or more heater chip/nozzle plate assemblies thereby forming a layer of encapsulant material.

18. The method of claim 14 wherein the encapsulant material comprises a polymeric material.

19. The method of claim 18 wherein said polymeric material is curable by actinic radiation, thermal energy or by a combination of actinic radiation and thermal energy.

20. The method of claim 19 further comprising:

exposing the stencil printed layer of encapsulant material to either actinic radiation, thermal energy or a combination thereof to substantially cure the polymeric material.

21. The method of claim 14 wherein the encapsulant material has a viscosity of from about 25,000 to about 240,000 centipoise as measured on a Brookfield cone and plate viscometer at 25° C. at a shear rate of 2.0 s^{-1}.

22. The method of claim 14 wherein the stencil printed layer of encapsulant material has a height from about 0.001 to about 0.015 inches.

23. An ink jet print cartridge comprising:

a flexible circuit including electrical traces;

a heater chip/nozzle plate assembly comprising a heater chip and a nozzle plate; and

electrical connections between the traces and the heater chip/nozzle plate assembly,

wherein a stencil printed layer comprising an encapsulant material encapsulates the electrical connections, the barrier layer having a height of from about 0.001 to about 0.015 inches.

24. The ink jet print cartridge of claim 23 wherein the height of the layer is from about 0.003 to about 0.009 inches.

25. The ink jet print cartridge of claim 23 wherein the encapsulant material comprises a thermal cure epoxy adhesive.